Homeland Defense

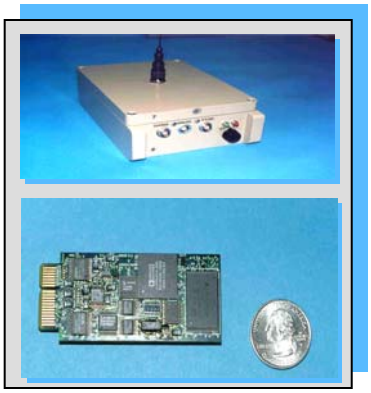
ARDEC – Picatinny, New Jersey 07806-5000

US Army Research, Development & Engineering Command

Sensor Technologies

Picatinny's *Acoustic Center of Excellence* is the key to ARDEC's sensor technologies applied to Homeland Defense. Our mission includes the execution of fundamental and applied research in acoustic technology to provide our soldiers support in detection, tracking, and identification of ground and air targets. This is also being applied to our new Homeland Defense / Homeland Security mission. Some examples of our applied Sensor Technologies for Homeland Defense and Homeland Security are the Acoustic-Seismic Unattended Ground Sensor (UGS) and the Low-Powered OmniDirectional Tracking System (LOTS).

Acoustic-Seismic Unattended Ground Sensor (UGS)



System Overview

- Compact light-weight acoustic-seismic UGS capable of detecting, tracking and classifying vehicles and personnel
- Sensor Network with wireless control to provide situational awareness

Capabilities

- Vehicle detection: up to 1 Km in the daytime and 4Km at night
- Personnel detection: 30 to 50 meters, terrain-dependent
- Size: 14 x 19.7 x 6.35cm
- Weight: 1.36Kg

Low-Powered OmniDirectional Tracking System (LOTS)

System Overview

- An innovative approach to intelligent tracking solutions for surveillance and monitoring applications
- Provides 360° photography, utilizing unique 360° omni-directional imaging technology
- Night time capability optional

Capabilities

- Paracameras resolution better than fish-eye, comparable to a 3 camera multi-view system
- Tracks all movement in a 60-80 meter diameter area
- Tracks multiple targets (up to 64)
- High speed, 15-30fps on a 233 mmx
- Power – 20 Watts

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For more information, contact the Center for Homeland Defense Technologies and Security Readiness via mail to: Commander, U.S. Army ARDEC, ATTN: AMSTA-AR-FSF-R, Building 407, Picatinny Arsenal, NJ 07806-5000; via telephone at (973) 724-6255; or via e-mail to: pica-hld@pica.army.mil or heberley@pica.army.mil.